

AMENDMENTS TO THE CLAIMS

A complete listing of all claims and their current status is presented below. By this Amendment, Claims 1, 20, and 25 are amended, Claims 8 and 19 are canceled, and Claims 29-34 are added. In the changes made to the following claims, ~~[[deletions are double bracketed]]~~ or ~~shown with strike-through~~, and additions are underlined.

Listing of Claims:

1. **(Currently Amended)** A medical device for insertion into a bodily vessel to treat an aneurysm having an aneurysm neck, the device comprising:

a mechanically expandable device expandable from a first position to a second position, said mechanically expandable device, when inserted into the bodily vessel, is expandable radially outward to the second position such that the exterior surface of said mechanically expandable device engages with the inner surface of the vessel so as to maintain a fluid pathway through said vessel;

a membrane attached to the exterior surface of said mechanically expandable device, the membrane having pores of a size between 100 nm and 10 μ m and comprising a therapeutically effective amount of a chemical compound comprising a biosynthesis accelerator to stimulate cell growth, the membrane being configured such that when the device is inserted adjacent an aneurysm, the membrane faces the aneurysm and releases the chemical compound toward the aneurysm; and

a particle comprising a polymer mixed with the chemical compound that controls to manage the release rate of the chemical compound, the particle comprising a first polymer forming a hydrophilic shell and a second polymer forming a hydrophobic core;

wherein the mechanically expandable device provides a support for the release of the chemical compound within the aneurysm to stimulate cell growth within the aneurysm and close the aneurysm neck.

2. **(Previously Presented)** The device according to claim 1, wherein the accelerator is a threo-1-phenyl-2-decanoylamino-3-morpholino-1-propanol compound.

3. **(Previously Presented)** The device according to claim 2, wherein the accelerator is L-threo-1-phenyl-2-decanoylamino-3-morpholino-1propano (L-PDMP) and therapeutically acceptable salts thereof.

4. **(Previously Presented)** The device according to claim 3, wherein the L-PDMP compound stimulates the biosynthesis of glycosphingolipids (GSL)

5. **(Previously Presented)** The device according to claim 4, wherein the L-PDMP compound stimulates the biosynthesis of Lactosylceramide (LacCer) and glucosylceramide (GlcCer).

6. **(Previously Presented)** The device according to claim 1, wherein the polymer is biocompatible, biodegradable, hydrophilic, and has a high degree of swelling.

7. **(Previously Presented)** The device according to claim 6, wherein the polymer is in a solid or highly viscous form, or is highly elastic.

8. **(Canceled)**

9. **(Previously Presented)** The device according to claim 1, wherein the polymer is selected from the group consisting of: synthetic biodegradable polymers such as Poly (glycolic acid) (PGA), Poly (lactic acid) (PLA), Poly (lactic-co-glycolic acid) (PLGA), poly (ε-caprolactone), Polyanhydride, poly (orthoesters), polyphosphazane; biodegradable polymers from natural sources such as modified polysaccharides (cellulose, chitin, dextran) and Modified proteins (fibrin, casein); and hydrogels or superabsorbants such as Poly (ethylene oxide) PEO), Poly (ethylene glycol) PEG, Methylacrylate (MAA), Maleic anhydride (MAH), Polyacrylamide, Poly (hydroxyethyl methacrylate), Poly (N-vinyl pyrrolidone), Poly (vinyl alcohol).

10. **(Canceled)**

11. **(Previously Presented)** The device according to claim 1, wherein the mechanically expandable device comprises a generally tubular structure having an exterior surface defined by a plurality of interconnected struts having interstitial spaces therebetween.

12.-16. **(Canceled)**

17. **(Previously Presented)** The device according to claim 1, wherein the membrane comprises multiple layers.

18. **(Previously Presented)** The device according to claim 1, wherein the membrane is biodegradable.

19. **(Canceled)**

20. **(Currently Amended)** The device according to claim 1, wherein the polymer is amorphous or semi-crystalline.

21. **(Previously Presented)** The device according to claim 1, further comprising radiopaque markers incorporated in the polymer to improve the visibility of the polymer and chemical compound during deployment.

22. **(Previously Presented)** The device according to claim 21, further comprising radiopacifiers such as barium sulphate, zirconium dioxide or iodine.

23. **(Previously Presented)** The device according to claim 1, wherein the mechanically expandable device is biodegradable.

24. **(Previously Presented)** The device according to claim 23, wherein the mechanically expandable device and polymer biodegrade at different rates.

25. **(Currently Amended)** ~~The~~ A method for treating an aneurysm having an aneurysm neck, the method comprising:

positioning a mechanically expandable device into a bodily vessel proximate to the aneurysm neck, the mechanically expandable device comprising a membrane with pores having a size between 100nm and 10 μ m on an exterior surface of the device;

releasing, from the membrane, a therapeutically effective amount of a chemical compound comprising a biosynthesis accelerator to stimulate cell growth within the aneurysm, wherein the chemical compound is released from the membrane toward the aneurysm; and

disposing a particle through the expandable device to the aneurysm, the particle having a first polymer forming a hydrophilic shell and a second polymer forming a hydrophobic core;

wherein the mechanically expandable device provides a support for the release of the chemical compound within the aneurysm to stimulate cell growth within the aneurysm and close the aneurysm neck.

26. (Canceled)

27. (Canceled)

28. (Canceled)

29. (New) A medical apparatus for insertion into a bodily vessel to treat an aneurysm, the device comprising:

a device expandable from a first position to a second position, such that, when expanded to the second position within the vessel, an exterior surface of said device engages an inner surface of the vessel; and

a particle comprising (a) a first polymer forming a hydrophilic shell, and (b) a second polymer forming a hydrophobic core, the particle being sized for placement within the aneurysm through a wall of the mechanically expandable device when the expandable device is in the second position.

30. (New) The apparatus of Claim 29, further comprising a membrane coupled with the exterior surface, the membrane being porous and comprising a therapeutically effective amount of a biosynthesis accelerator to stimulate cell growth.

31. (New) The apparatus of Claim 30, wherein the membrane is configured such that when the device is inserted adjacent an aneurysm, the accelerator is released from the membrane toward the aneurysm.

32. (New) The apparatus of Claim 30, wherein the membrane comprises pores having a size between 100nm and 10 μ m.

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33. (New) The apparatus of Claim 30, wherein the membrane comprises pores having a size of about 100 μm .

34. (New) The apparatus of Claim 30, wherein the membrane comprises pores having a size of about 10nm to 100nm.